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HUSSAIN, TAUQIR	
ART UNIT	**PAPER NUMBER**
2152	

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12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/681,870	AGASAVEERAN ET AL.	
	Examiner	Art Unit	
	Tauqir Hussain	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,9-22 and 25-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9-22 and 25-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/28/2007 has been entered.

Response to Amendment

2. This office action is in response to amendment /reconsideration filed on 11/28/2007, the amendment/reconsideration has been considered. Claims 1, 6, 12, 22 and 25-27 have been amended and claims 7-8, 23-24 and 30 have been cancelled, Therefore, Claims 1-6, 9-22 and 25-27 are pending for examination, the rejection cited as stated below.

Response to Arguments

3. Applicant's arguments filed on 11/28/2007 have been fully considered but they are not deemed to be persuasive. In the remarks, applicant argued in substance that

(a) Scoredos does not teaches, "database for storing information about connection request".

(b) Scoredos does not teach, "a maximum number of connections allowed in a cycle; and a maximum number of connection requests per requester during cycle".

(c) Scoredos does not teaches, "dropping the connection silently".

(d) Scoredos does not teaches, "connection requests and associated application layer outcomes".

(e) Reddy does not teaches, "if the throttle filter allows the transport layer component of the connection request, proceeding with the application layer component".

As to point (a) Scoredos teaches, when an incoming IP packet is received the packet is then processed to determine source and destination IP addresses for the packet. an entry is then created in a limit table for the IP entity, if no entry for that IP entity exists in the table (Scoredos, Abstract). Examiner asserts that incoming IP packet is a connection request and creating an entry in the limit table is storing information about connection request. Further, according the dictionary meaning of "Database" a table of record or rule is within the scope of database.

As to argument (b) Scoredos teaches, a maximum number of connections allowed in a cycle, where cycle is "any complete round or series of occurrences that repeats or is repeated". Scoredos describes "a limit count" (which means there is a maximum number of connection allowed) representing a number of concurrently allowable connection between the IP entity and server", where first occurrence of connection request is a cycle. Scoredos further describe, "a maximum number of connection requests per requester during cycle" as recited in (Scoredos, Abstract also [0045]) "a limit count representing a number of concurrently allowable connection between the IP entity and server" where IP entity can be a single requestor.

As to argument (c), Scoredos teaches, "dropping connection silently" (Scoredos, Abstract), where Scoredos recites, the packet is blocked if the attempted connection would exceed the limit count for the IP entity, where blocking packet is dropping connection silently further details can be found in (Scoredos, [0023]).

As to argument (d), Scoredos teaches the method of controlling connections from an IP to a server, which involves monitoring the status of connection/application layer outcomes or state of connection. Scoredos limits the connection by monitoring the state of concurrent connection at a time, so if connection drops client browser or application will hung up and therefore Scoredos does disclose appl'cation layer outcome.

As to argument (e) Examiner respectfully disagree and cites a paragraph from Reddy Col.8, lines 36-49. In the light of Fig.1 and Fig.4, Reddy discloses, upon establishing connection which is "allowing transport layer component of the connection request" agents communicates to the application. It is clearly disclosed that communication is done via using HTTP protocol which associates a browser meaning browser being application layer component.

4. Any remark, which is not in claimed language, is not being considered by Examiner.

Claim Objections

5. Claim 6 is objected to because of the following informalities: Claim recite, "comprises at least one of: a list of connection requestor IP address to be; in line4.

However, Examiner will read the claim as " a list of connection requestor IP address to be blocked". Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 1-3, 5, 10-20, 22 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scoredos et al. (Pub. No.: US 2004/0250127 A1), hereinafter "Scoredos" in view of Reddy et al. (Patent No.: US 7062540 B2), hereinafter "Reddy" and further in view of Ben-David (Patent No.: US 6273622 B1), hereinafter "Ben".

8. As to claim 1, Scoredos discloses, a method for filtering transport layer connections with application layer information, comprising the steps of:

receiving a connection request having an application layer component and a transport layer component ([0015, lines 1-4], where tcp/ip connection comprises of transport layer component and application layer component);

providing a connection database to store information about connection requests ([0016, lines 1-4], table of rules can be a database);

the connection request comprises:

a maximum number of connections allowed in a cycle (Scoredos, Abstract, "a limit count" (which means there is a maximum number of connection allowed)

representing a number of concurrently allowable connection between the IP entity and server", where first occurrence of connection request is a cycle); and

a maximum number of connection requests per requestor during a cycle (Scoredos, Abstract also [0045]) "a limit count representing a number of concurrently allowable connection between the IP entity and server" where IP entity can be a single requestor);

providing a throttle filter using data from the connection database, the throttle filter to filter the connection request at the transport layer component ([0016, lines 1-5]);

applying the throttle filter to the received connection request ([0016, lines 8-9]);

if the throttle filter blocks the transport layer component of the connection request, dropping the connection request silently ([0033, lines 2-4]); and

Scoredos does not explicitly disclose, providing information about associated application layer outcomes; or if the throttle filter allows the transport layer component of the connection request, proceeding with the application layer component. However, Reddy teaches, providing information of associated application layer outcomes (Col.7, lines 64-66); and if the throttle filter allows the transport layer component of the connection request, proceeding with the application layer component (Col.8, lines 5-23, where notifications are outcome of applications outcome which are communicated through firewall by web server and displayed at user interface in http form or could be a HTML page with time out notice or error notice or status).

Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to combine the teachings of Scoredos with the teachings

of Reddy in order to authenticate the remote user to access, monitor or execute the application through monitoring software based on users build up profile kept in the databases in appropriate domain.

Scoredos and Reddy however are silent on "creating a soft error in a client from an unacknowledged connection request".

Ben however discloses, "creating a soft error in a client from an unacknowledged connection request" (Ben, Fig.4, timeout for Rx of unacknowledged messages-124, Col.2, lines 35-45, where unacknowledged is based on timing out of a connection which is a soft error).

Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to combine the teachings of Scoredos and Reddy with the teachings of Ben in order to invention provides a protocol and associated method for enhancing the throughput and response time performance of Transmission Control Protocol/Internet Protocol (TCP/IP) applications and services in Internet and Intranet environments that use the TCP/IP protocol suite, e.g., HTTP Internet browsers, HTTP servers, FTP servers, etc.

9. As to claim 12, Scoredos discloses, a system to filter server connections in an embedded system, comprising:

a network interface to receive a connection request from a requestor (Scoredos, Fig.1, step-112, [0015, lines 13-14]) , the connection request having an application layer connection component and a transport layer connection component ([0015, lines 1-4],

tcp/ip connection means it contains header information which deals with transport layer and payload which contains data or deals with application layer);

a filter device to filter connections using the transport layer connection component (Scoredos, [0015, line 14]), the filter device including a connection database and a throttle filter (Scoredos, [0015, lines 3-5], where firewall is filtering device and set of rules is a database), the connection database to store information about connection requests, the throttle filter having data from the connection database to filter connection requests using the transport layer connection component (Scoredos, [0016, lines 1-5], filtering, [0016, lines 1-4], table of rules could be a database),

the stored information about connection requests comprises (Scoredos, Abstract, where connection information is stored in limit table);

a maximum number of connections allowed in a cycle (Scoredos, Abstract, "a limit count" (which means there is a maximum number of connection allowed) representing a number of concurrently allowable connection between the IP entity and server", where first occurrence of connection request is a cycle); and

a maximum number of connection requests per requestor during a cycle (Scoredos, Abstract also [0045]) "a limit count representing a number of concurrently allowable connection between the IP entity and server" where IP entity can be a single requestor);

a controller coupled to the filter device and the network interface (Scoredos, Fig.1, element-100), the controller to apply the throttle filter to the transport layer connection component of the connection request (Scoredos, [0015], where firewall is

processing the incoming traffic which could be connection request), to drop the connection request silently if the throttle filter blocks the transport layer component (Scoredos, [0033, lines 2-4], where connection is dropped based on the limit rule and allowed packets will obviously be further processed), to proceed with an application layer connection if the throttle filter allows the transport layer component (Scoredos, [0033, lines 2-4], where connection is dropped based on the limit rule and allowed packets will obviously be further processed), to add data about the application layer connection to the connection database, and to update the throttle filter with information about the connection database (Fig.1, Step-112 and Step-101,[0015, lines 12-14], interface card is controller which is coupled with filtering device 101),

Scoredos does not disclose explicitly, "an application layer connection component outcomes". However, Reddy teaches, "an application layer connection component outcomes" (Fig.2, Step-76, Col.6, lines 17-25 and lines 29-36, where database 76, keeps events which are outcomes of application and uses them later on as web server sends the response to client through HTTP protocol).

Scoredos and Reddy however are silent on "creating a soft error in a client from an unacknowledged connection request".

Ben however discloses, "creating a soft error in a client from an unacknowledged connection request" (Ben, Fig.4, timeout for Rx of unacknowledged messages-124, Col.2, lines 35-45, where unacknowledged is based on timing out of a connection which is a soft error).

10. As to claim 27, a computer program product having a computer-readable medium including computer program logic encoded thereon that, when performed on a computer system directs the computer system to perform the method of:

receiving a connection request having an application layer component and a transport layer component ([0015, lines 1-4], where tcp/ip connection comprises of header information which is transport layer component and payload information which is application layer component);

providing a connection database to store information about connection requests [(0016, lines 1-4], table of rules has the profile which could be a database),

the stored information about connection requests comprises (Scoredos, Abstract, where connection information is stored in limit table);

a maximum number of connections allowed in a cycle (Scoredos, Abstract, "a limit count" (which means there is a maximum number of connection allowed) representing a number of concurrently allowable connection between the IP entity and server", where first occurrence of connection request is a cycle); and

a maximum number of connection requests per requestor during a cycle (Scoredos, Abstract also [0045]) "a limit count representing a number of concurrently allowable connection between the IP entity and server" where IP entity can be a single requestor);

providing a throttle filter using data from the connection database, the throttle filter to filter the connection request at the transport layer component ([0016, lines 1-5) and [0050, lines 1-3], where limit rule is incorporated in the data structure);

applying the throttle filter to the received connection request ([0016, lines 7-9], where packets are processed through filtering functions);

if the throttle filter blocks the transport layer component of the connection request, dropping the connection request silently ([0033, lines 2-4]; depending on the rule connection is dropped);

Scoredos does not explicitly disclose, "an information about associated application layer outcomes"; or "if the throttle filter allows the transport layer component of the connection request, proceeding with the application layer component" or "creates a soft error in a requestor from an unacknowledged connection request".

However, Reddy teaches, providing a connection database to store information of associated application layer outcomes (Col.7, lines 64-66) ; and if the throttle filter allows the transport layer component of the connection request, proceeding with the application layer component (Col.8, lines 5-23, where notifications are outcome of applications outcome which are communicated through firewall by web server and displayed at user interface in http form or could be a HTML page with time out notice or error notice or status).

Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the teachings of Scoredos with the teachings of Reddy in order to authenticate the remote user to access, monitor or execute the application through monitoring software based on users build up profile kept in the databases in appropriate domain.

Scoredos and Reddy however are silent on "creating a soft error in a client from an unacknowledged connection request".

Ben however discloses, "creating a soft error in a client from an unacknowledged connection request" (Ben, Fig.4, timeout for Rx of unacknowledged messages-124, Col.2, lines 35-45, where unacknowledged is based on timing out of a connection which is a soft error).

11. As to claim 2, Scoredos, Reddy and Ben discloses the invention substantially as in parent claim 1, including, updating the throttle filter with information from the connection database (Scoredos, Fig.1, Step-100, [0003, lines 5-10]).

adding data from an application layer outcome of the connection request to the connection database (Reddy, Col.7, lines 64-66, where agent detects the application outcome as notifications which is added into database Fig.2,Step-76).

12. As to claim 3, Scoredos, Reddy and Ben discloses the invention substantially as in parent claim 2, including, recording a connection requestor identifier to the connection database (Scoredos, [0006, lines 7-9, where IP entity is connection requestor and IP is identifier); and

providing a connection requestor rank to the connection requestor identifier (Scoredos, [0057, lines 13-15], clearly shows that each connection has an ID against its connection request) and [0059, lines 1-9], where hash technique is interpreted as ranking to give priority for faster processing).

the database adds all the associated outcome events from each application and it will be an obvious variation to construct some sort of ranking system to give priority to certain client entity based on clients frequent request for certain application (Reddy, Col.7, lines 64-66, where notifications and events are the outcomes of applications running on compute, Fig.2, Step-40).

13. As to claim 5, Scoredos, Reddy and Ben discloses the invention substantially as in parent claim 1, including, the throttle filter is a list of connection request characteristics as indicated by data from the connection database and the step of applying the throttle filter further comprises comparing data from the connection request to the list of connection request characteristics (Scoredos, [0006, lines 1-11], where limit table is interpreted as throttle filter).

14. As to claim 10, Scoredos, Reddy and Ben discloses the invention substantially as in parent claim 1, including, the connection request is an HTTP request; the transport layer component is TCP connection component (Scoredos, [0015, lines 10-14]),

the application layer component is an HTTP connection component (Reddy, Col.8, lines 46-49).

15. As to claims 11, 13 and 14, the claims are rejected for the same rationale set forth in claim 10 above.

16. As to claim 15, Scoredos and Reddy disclose the invention substantially as in parent claim 12, including, the filter device further comprises a rate limiter to switch the

filter device between global and selective modes (Scoredos, [0052, lines 5-9], where limit table is rate limiter and allowed or blocked states are global and selective modes), the rate limiter to switch the filter device to global mode if a rate limit threshold is exceeded and to switch the filter device to selective mode if the rate limit threshold is not exceeded (Scoredos, Fig.1, Step-112, [0052, lines 10-14], where limit table is a rate limiter and if connection establishes or allowed it is a selective mode if connection is blocked it can be interpret as selective mode)

the controller configured to drop the connection request silently without applying the throttle filter if the filter device is in global mode and to apply the throttle filter if the filter device is in selective mode (Scoredos, Fig.1, Step-123 [0016, lines 5-6], where, switch is controller to forward or drop the connection).

17. As to claim 16, Scoredos and Reddy disclose the invention substantially as in parent claim 12, including, the rate limit threshold further comprises a limit of connections created in a connection cycle period (Scoredos, [0046, lines 4-6], where number of connections are limit threshold in a connection cycle period).

18. As to claim 17, Scoredos and Reddy disclose the invention substantially as in parent claim 12, including, the rate limit threshold further comprises a rate of incoming connections ([0052, lines 1-9]).

19. As to claim 18, Scoredos and Reddy disclose the invention substantially as in parent claim 12, including, the connection database is a table in which each entry has

an IP address of a connection requestor and an associated rank based on an outcome of a connection attempted in response to a connection request from the connection requestor (Scoredos, [0050, lines 1-4], database create an entry of every connection and [0053, lines 1-9], connection is prioritized based on prior entry and connection history in the database).

20. As to claim 19, Scoredos and Reddy disclose the invention substantially as in parent claim 12, including, each entry of the table further includes a port number of the connection requestor (Scoredos, [0053, lines 5-9], where database also keeps an entry of connection port number).

21. As to claim 20, Scoredos and Reddy disclose the invention substantially as in parent claim 12, including, each entry of the table further includes a virtual routing forwarding table ID of the connection requestor (Scoredos, [0053, liens 1-5], where state table entry can be a VRF pointer assigned to each connection attempted at application layer).

22. Claims 28 and 29 are rejected for the same rationale as applied to parent claims 1, 12 and 27 above and further, Scoredos discloses, in [0035], there is a client profile established which filter uses to compare before allowing or dropping the connections.

23. Claims 6 and 22 are rejected under 35 U.S.C 103 as being unpatentable over Scoredos, Reddy and Ben in view of Haviv et al. (Pub. No.: US 2002/0059517 A1), hereinafter, "Haviv".

24. As to claim 6, Scoredos, Reddy and Ben discloses the invention substantially as in parent claim 5, including, the list of connection request characteristics further comprises a list of connection requestor IP addresses to be blocked as indicated by data from the connection database (Scoredos, [0002, lines 7-11], where set of rules is a database and set of rules can be a list of blocked IP addresses).

Scoredos, Reddy and Ben however are silent on disclosing, "a list of connection requestor port numbers to be blocked" or "a list of connection requestor virtual routing forwarding table IDs to be blocked".

Haviv however discloses, a list of connection requestor port numbers to be blocked" (Haviv, [0037], where blocking client ports are disclosed further creating rules merely to block unwanted traffic is an obvious variation, therefore blocking VRF traffic will be obvious to one skilled in the art).

Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to combine the teachings of Scoredos, Reddy and Ben as applied claim 1-3 and 5 above with the teachings of Haviv in order to provide a a system that enables filtered application-to-application communication in a server farm in a multi-channel reliable hardware environment (e.g. InfiniBand) and implementation of multi-

channel reliable communication hardware may reduce the number of communication software layers above.

25. As to claim 22 has similar limitations as claim 6 and therefore is rejected for under same rationale.

26. Claim 9 is rejected under 35 U.S.C 103 as being unpatentable over Scoredos and Reddy in view of Maruyama et al. (Pub. No.: US 2002/0124103 A1), hereinafter, "Maruyama".

27. As to claim 9, Scoredos and Reddy disclose the invention substantially as in parent claim 1, including, determining whether a limit of connections created in a connection cycle period has been exceeded (Scoredos, [0033, lines 1-2], where rule is set to check the connections per IP address);

if the limit of connections created has been exceeded, dropping the connection request (Scoredos, [0033, lines 2-4], where exceeded connection is dropped). Scoredos and Reddy, however are silent on, if the limit of connections created has not been exceeded, determining whether a rate of incoming connections has been exceeded or if the rate of incoming connections has been exceeded, then dropping the connection request silently or if the rate of incoming connections has not been exceeded, then comparing requestor identification information in the TCP connection component of the connection request to data in the throttle filter. However, Maruyama teaches, if the limit of connections created has not been exceeded, determining whether a rate of incoming

connections has been exceeded ([0011, lines 10-20], TCP connection rate is monitored for security purposes). Maruyama also discloses, if the rate of incoming connections has been exceeded, then dropping the connection request silently ([0011,lines 24-28], where excessive connection is dropped). Maruyama further discloses, if the rate of incoming connections has not been exceeded, then comparing requestor identification information in the TCP connection component of the connection request to data in the throttle filter ([0035, 16-22], where identifier in the tcp packet is examined whether to allow a new connection or associate with established connection).

Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the teachings of Scoredos, and Reddy with the teachings of Maruyama in order to establish a monitoring system from remote computer to keep track of working applications by anticipating the critical notifications/outcomes generated by those applications and associated solutions to these outcomes.

28. Claims 25 and 26 are rejected under 35 U.S.C 103 as being unpatentable over Scoredos and Reddy in view of Maruyama and further in view of Ben.

29. As to claim 25, Scoredos discloses, a method for filtering HTTP server connections in an embedded system, comprising the steps of:

receiving a connection request having an HTTP connection component and a TCP connection component ([0015, lines 1-4], where header information in the packet is TCP connection and payload data is an http connection);

providing a connection database to store information about connection requests ([0016, lines 1-4], table of rules can be a database),

the connection request comprises:

a maximum number of connections allowed in a cycle (Scoredos, Abstract, "a limit count" (which means there is a maximum number of connection allowed) representing a number of concurrently allowable connection between the IP entity and server", where first occurrence of connection request is a cycle); and

a maximum number of connection requests per requestor during a cycle (Scoredos, Abstract also [0045]) "a limit count representing a number of concurrently allowable connection between the IP entity and server" where IP entity can be a single requestor);

providing a throttle filter using data from the connection database, the throttle filter to filter the connection request at the TCP connection component ([0016, lines 1-5], where switch-123 is a throttle filter);

if the limit of connections created has not been exceeded ([0033, lines 1-2], where connection status can show if the limit has exceeded);

determining whether a limit of connections created in a connection cycle period has been exceeded ([0033, lines 1-2], where rule has defined for maximum connection in limit rule also where rule is set to check the connections per IP address);

if the limit of connections created has been exceeded, dropping the connection request silently (0033, lines 2-4], where exceeded connection is dropped);

if the throttle filter blocks the TCP connection component, dropping the

connection request silently ([0033, lines 2-4]);

updating the throttle filter with information from the connection database ([0052, lines 10-12]).

Scoredos does not explicitly discloses, if the limit of connections created has not been exceeded, determining whether a rate of incoming connections has been exceeded or if the rate of incoming connections has been exceeded, then dropping the connection request silently or if the rate of incoming connections has not been exceeded, then comparing requestor identification information in the TCP connection component of the connection request to data in the throttle filter or adding data from the HTTP connection component to the connection database. However, Maruyama teaches, if the limit of connections created has not been exceeded, determining whether a rate of incoming connections has been exceeded ([0011, lines 10-20], tcp connection rate is monitored for security purposes). Maruyama also discloses, if the rate of incoming connections has been exceeded, then dropping the connection request silently ([0011,lines 24-28, where excessive connection is dropped). Maruyama further discloses, if the rate of incoming connections has not been exceeded, then comparing requestor identification information in the TCP connection component of the connection request to data in the throttle filter ([0035, 16-22], where identifier in the tcp packet is examined whether to allow a new connection or associate with established connection). Neither Scoredos nor Maruyama discloses, if the throttle filter allows the TCP connection component, proceeding with the HTTP connection component or adding data from the HTTP connection component to the connection database. However,

Reddy discloses, if the throttle filter allows the TCP connection component, proceeding with the HTTP connection component (Col.7, lines 41-45, where user has established the http connection). Reddy further discloses, adding data from the HTTP connection component to the connection database (Col.7, lines 41-48 and lines 4-7, where it can be seen that user's HTTP request has to go through security Fig.2, step-86 where his login will be added into security database).

Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the teachings of Scoredos and Maruyama with the teachings of Reddy in order to establish a monitoring system from remote computer to keep track of working applications by anticipating the critical notifications/outcomes generated by those applications and associated solutions to these outcomes.

Scoredos, Reddy and Maruyama however are silent on "creating a soft error in a client from an unacknowledged connection request".

Ben however discloses, "creating a soft error in a client from an unacknowledged connection request" (Ben, Fig.4, timeout for Rx of unacknowledged messages-124, Col.2, lines 35-45, where unacknowledged is based on timing out of a connection which is a soft error).

Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to combine the teachings of Scoredos, Reddy and Maruyama with the teachings of Ben in order to invention provides a protocol and associated method for enhancing the throughput and response time performance of Transmission Control Protocol/Internet Protocol (TCP/IP) applications and services in

Internet and Intranet environments that use the TCP/IP protocol suite, e.g., HTTP Internet browsers, HTTP servers, FTP servers, etc.

30. As to claim 26, Scoredos discloses, a method for filtering HTTPS server connections in an embedded system, comprising the steps of:

receiving a connection request having an HTTPS connection component and a TCP connection component ([0015, lines 1-4], TCP header information is a transport layer component and payload is a HTTPS component);

providing a connection database to store information about connection requests ([0016, lines 1-4], table of rules can be a database);

the connection request comprises:

a maximum number of connections allowed in a cycle (Scoredos, Abstract, "a limit count" (which means there is a maximum number of connection allowed) representing a number of concurrently allowable connection between the IP entity and server", where first occurrence of connection request is a cycle); and

a maximum number of connection requests per requestor during a cycle (Scoredos, Abstract also [0045]) "a limit count representing a number of concurrently allowable connection between the IP entity and server" where IP entity can be a single requestor);

providing a throttle filter using data from the connection database, the throttle filter to filter the connection request at the TCP connection component (Fig.1, step-123, [0016, lines 1-5], where switch is a throttle filter which filters the connections);

determining whether a limit of connections created in a connection cycle period has been exceeded ([0033, lines 1-2], where rule is set to check the connections per IP address);

if the limit of connections created has been exceeded, dropping the connection request silently (0033, lines 2-4], where exceeded connection is dropped);

if the throttle filter blocks the TCP connection component, dropping the connection request silently ([000052, lines 13-14], where connection can be dropped silently or reset based on the specified rule);

if the throttle filter allows the TCP connection component, proceeding with the HTTPS connection component (Col.7, lines 41-45, where user has established the http connection);

updating the throttle filter with information from the connection database ([0052, lines 10-12]).

Scoredos do not explicitly discloses, if the limit of connections created has not been exceeded, determining whether a rate of incoming connections has been exceeded or if the rate of incoming connections has been exceeded, then dropping the connection request silently or if the rate of incoming connections has not been exceeded, then comparing requestor identification information in the TCP connection component of the connection request to data in the throttle filter. However, Maruyama teaches, if the limit of connections created has not been exceeded, determining whether a rate of incoming connections has been exceeded ([0011, lines 10-20], TCP connection rate is monitored for security purposes). Maruyama also discloses, if the rate of incoming connections

has been exceeded, then dropping the connection request silently ([0011,lines 24-28, where excessive connection is dropped). Maruyama further discloses, if the rate of incoming connections has not been exceeded, then comparing requestor identification information in the TCP connection component of the connection request to data in the throttle filter ([0035, 16-22], where identifier in the tcp packet is examined whether to allow a new connection or associate with established connection). Neither Scoredos nor Maruyama discloses, if the throttle filter allows the TCP connection component, proceeding with the HTTP connection component or adding data from the HTTP connection component to the connection database. However, Reddy discloses, if the throttle filter allows the TCP connection component, proceeding with the HTTP connection component (Col.7, lines 41-45, where user has established the http connection). Reddy further discloses, adding data from the HTTP connection component to the connection database (Col.7, lines 41-48 and lines 4-7, where it can be seen that user's HTTP request has to go through security Fig.2, step-86 where his login will be added into security database).

Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the teachings of Scoredos and Maruyama with the teachings of Reddy in order to establish a monitoring system from remote computer to keep track of working applications by anticipating the critical notifications/outcomes generated by those applications and associated solutions to these outcomes.

Scoredos, Reddy and Maruyama however are silent on "creating a soft error in a client from an unacknowledged connection request".

Ben however discloses, "creating a soft error in a client from an unacknowledged connection request" (Ben, Fig.4, timeout for Rx of unacknowledged messages-124, Col.2, lines 35-45, where unacknowledged is based on timing out of a connection which is a soft error).

Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to combine the teachings of Scoredos, Reddy and Maruyama with the teachings of Ben in order to invention provides a protocol and associated method for enhancing the throughput and response time performance of Transmission Control Protocol/Internet Protocol (TCP/IP) applications and services in Internet and Intranet environments that use the TCP/IP protocol suite, e.g., HTTP Internet browsers, HTTP servers, FTP servers, etc.

31. Claims 4 and 21 are rejected under 35 U.S.C 103 as being unpatentable over Scoredos and Reddy in view of Gillies et al. (Pub No.: US 2003/0212821 A1), hereinafter "Gillies".

32. As to claim 4, Scoredos and Reddy discloses the invention substantially as in parent claim 1, however, Scoredos and Reddy are Silent on, wherein the step of updating the throttle filter with information from the connection database comprises periodically replacing throttle filter data with a preselected number of connection requestor identifiers ranked least desirable in the connection database.

However, Gillies teaches, updating the throttle filter with information from the connection database comprises periodically replacing throttle filter data with a

preselected number of connection requestor identifiers ranked least (Fig. 6E, [0093, lines 4-16], where data is getting replaced by age and old data is getting replaced by new data periodically).

Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to combine the teachings of Scoredos and Reddy as applied to claim 1 above, with the teachings of Gillies in order to update the data and discard old data with newer data in order to control the size of the database and avoid the multiplicity of same data.

33. As to claim 21, Scoredos, Reddy and Gillies discloses the invention substantially as in parent claim 12, including, the system wherein each entry in the table includes an entry age, the filter device configured to delete entries having an entry age that exceeds an age threshold (Fig. 6E, [0093, lines 4-16], where data is getting replaced by age and old data is getting replaced by new data periodically).

34. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references, as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in its entirety as potentially teaching of all or part of the claimed invention, as well as the context.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tauqir Hussain whose telephone number is 571-270-1247. The examiner can normally be reached on 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571 272 3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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